

MINE PRACTICES

Mining Pollution Control Strategies

Under the 1972 Clean Water Act (CWA), Congress authorized states to control non-point sources of pollution through the implementation of Best Management Practices (BMP). A BMP is defined as a measure determined to be the most effective practical means of preventing or reducing pollution inputs from nonpoint sources in order to achieve water quality goals. Idaho surface mining BMPs are included in the Idaho Surface Mining Act (SMA), Title 47, Chapter 15. Idaho Code 47-1501 states “it is the purpose of this chapter to provide for the protection of the public health, safety and welfare, through measures to reclaim the surface of all the lands within the state disturbed by exploration and surface mining operations and measures to assure the proper closure of cyanidation facilities and thereby conserve natural resources, aid in the protection of wildlife, domestic animals, aquatic resources, and reduce soil erosion.” (Idaho Code Title 47, Chapter 15, 47-1501.)

Under Executive order 88-23 (the Antidegradation Policy), the Idaho Department of Lands (IDL) is designated as the lead agency for surface mining and dredge and placer mining practices on all lands within the state, excluding tribal lands. IDL works closely with Idaho Department of Environmental Quality (IDEQ) in connection with the Surface Mining Act which forms the basis for achieving State and Federal consistency for nonpoint source activities on mined lands. Furthermore, IDL consults and cooperates with federal land managers (USFS and BLM) as well as other state agencies (Idaho Department of Fish Game and Idaho Department of Water Resources) to develop appropriate reclamation plans (Environmental Impact Statements for federal agencies on federal land).

The use of Mining Reclamation Plan information in developing TMDL implementation plans for watersheds will identify problem areas within the Blackfoot watershed and aid in the development of site specific BMP's for this TMDL implementation plan.

Selenium is the main contaminant resulting from phosphate mining within the Blackfoot Watershed. In addition to BMP's identified through the SMA, IDL, in conjunction with other federal agencies and phosphate mining companies, has developed the Selenium Management Practices guide to help eliminate selenium contamination from current and future mining practices. The revised BMP's found in the Selenium Management Practice guide have resulted in decreased amounts of selenium contamination from new mines. However, mine waste areas developed prior to the discovery of the selenium problem are still causing downstream contamination in the watershed. Discussions and studies among state and federal agencies, as well as the phosphate companies, are currently underway to resolve this pre-existing problem.

The main source of selenium contamination from phosphate mining is where middle waste shale overburden was placed outside of mined out pits, usually in valleys that are classified as a class 2, 3 or ephemeral. This practice was halted with the discovery that

selenium was becoming bioavailable due to surface and sub-surface water leaching selenium from the middle waste shale's within the overburden piles. BMP's identified in the Selenium Management Practices guide decrease the amount of selenium that can be leached out of new overburden piles.

Regulatory Actions

Under the SMA all mine operators, regardless of being on state, federal, or private lands, in Idaho must develop and submit a Reclamation Plan to the Idaho Department of Lands prior to mining. After IDL accepts the Reclamation Plan, a bond must be submitted by the mine owner or operator that will cover the entire estimated cost of the reclamation of the disturbed area. Periodically an inspection is conducted to insure the mine is being operated in accordance with the Reclamation Plan. If violations are found during an inspection then civil penalties will be assessed.

The IDL office in Idaho Falls will be the office of record for all SMA documentation concerning mining in the Blackfoot Watershed.

Reclamation Plan

Reclamation plans identify how a mine will be developed in relation to its surroundings. The plan details the location of the mine, its area and depth, where stockpiles and mine related equipment will be placed, where access and exit routes are established, the distance and location to the nearest water body, and how the mine will be reclaimed and what it will look like at the end of mine life.

Monitoring Plan

Mining practices in the Blackfoot Watershed may be inspected yearly for compliance with SMA. If any unsatisfactory conditions are identified, they will be corrected using standard IDL enforcement procedures.

SMA compliance inspections primarily include the following:

1. Area disturbed (acreage).
2. Type of disturbance.
3. Topography
4. Vegetation
5. Type of mining equipment.
6. Relationship with natural watercourses.
7. Hydrology issues.
8. Road stability and drainage.
9. Topsoil stockpiled and stable.
10. Weed control.
11. Erosion problems and potential problems.
12. Hazardous waste storage and removal.
13. Condition of pit walls in relation to their current state, final reclamation and potential safety issues.

14. Backfilling permits and covers. (If a pit is going to be backfilled with anything but concrete and asphalt debris, the mine operator will have to work with DEQ and acquire a Non Municipal Solid Waste Facility permit.)
15. Make sure mine is in compliance with other permits need.

IDL has the right of inspection on all lands. “Authorized officers of the Department of Lands, upon presentation of appropriate credentials, shall have the right to enter upon lands affected or proposed to be affected by exploration or surface mining operations to determine compliance “with SMA rules. (IDAPA 20.03.02.160.01 - Rules Governing Exploration, Surface Mining, and Closure of Cyanidation Facilities)

To date all current phosphate mining operations have been found to be in conformity with the SMA and relevant BMP’s.

In addition to the regular SMA inspection program conducted by IDL, IDEQ oversees the water quality monitoring by the mining companies and periodically checks this data with testing of their own.

The Selenium Management Practices guide will be revised periodically to incorporate the latest and best technology and engineering practices.

Performance Bond Requirements

Under the SMA, mining companies are responsible for posting a bond prior to the beginning of any surface mining on a mine panel covered by a plan. “An operator shall submit to the director, on a surface mining reclamation bond form, a performance bond meeting the requirements of this rule. The amount shall be the amount necessary to pay the estimated reasonable costs of reclamation required under the reclamation plan for each acre of land to be affected during the first year of operation, plus ten (10%) percent.” (IDAPA 20.03.02.120.01 - Rules Governing Exploration, Surface Mining, and Closure of Cyanidation Facilities)

All bonds will be for the reclamation of the mine only. IDL is not allowed to bond for water quality issues.

Civil Penalties

Civil penalties will be assessed against an operator of noncompliance. “In addition any operator who violates any of the provisions of the act or these rules, or who fails to perform duties imposed by these provisions, or who violates any order pursuant to the provisions of these rules shall be liable to a civil penalty of not less than five hundred dollars or more than two thousand five hundred dollars for each day a violation continues after notice from the director that such violation has occurred. In addition, the director may seek injunctive relief against the operator to enjoin the operator from continuing such violations.” IDAPA 20.03.02.160.06.a - Rules Governing Exploration, Surface Mining, and Closure of Cyanidation Facilities)

“Any person who willfully and knowingly falsifies any records, plans, information, or other data required by the SMA rules, or willfully fails, neglects, or refuses to comply with any of the provisions of these rules, shall be guilty of a misdemeanor and shall be punished by fine of not less than one thousand dollars (\$1,000.00) or more than five thousand dollars (\$5000.00) or imprisonment, not to exceed one (1) year.” (IDAPA 20.03.02.160.06.b - Rules Governing Exploration, Surface Mining, and Closure of Cyanidation Facilities)

When and if the operator of an affected mining operation comes into compliance from an order of noncompliance “the director will consider the matter resolved and shall take no further action with respect to such non-compliance.” (IDAPA 20.03.02.003.05 - Rules Governing Exploration, Surface Mining, and Closure of Cyanidation Facilities)